ward, and could be outlined easily with the finger. The preternatural mobility was very striking. By drawing upon the left shoulder in a direction backward, upward, and outward, the acromial end slipped readily into place and the sternal end could be made to assume its proper position with very slight pressure. Upon relaxing the extension, however, the deformity immediately reappeared. The examination gave the patient but little discomfort, although he complained of racking and tearing pains at both ends of the clavicle, even when undisturbed. He was dressed with an apparatus similar to that employed by Prof. Sayre for fracture of the clavicle. He wore this for four weeks and then resumed his work. Six months afterward the supra-acromial deformity had entirely vanished, but the prominence at the top of the sternum was still noticeable, as was also the approximation of the two heads of the sterno-cleido-mastoid. The use of the arm was perfect. Kaufmann reviews the recorded cases of this injury, which are seven in number exclusive of his own. In all of them great force was required to produce the accident, which, in several was associated with other injuries.

ARTHRECTOMY.

SENDLER records (*Deutsche Zeitschrift für Chirurgie*, vol. xxvii., 1888) several cases of operation upon the knee-joint in which that articulation was preserved and motion restored by the careful dissection of all the diseased synovial, ligamentous, and cartilaginous tissues. When the bone was found diseased it was gouged or scraped. His patients were of various ages, and all recovered from the operation.

Like most other surgeons who practise arthrectomy, he prefers the straight lateral incision to the anterior curved one in those cases in which he expects to obtain motion. In a large class of cases of joint disease the operation is destined to supplant excision, and has already saved many joints which a few years ago would have been thought so hopelessly diseased that the only possible or justifiable operative procedure would be complete excision or amputation.

OTOLOGY.

UNDER THE CHARGE OF

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DEVELOPMENT OF THE AURICLE IN MAN AND IN MAMMALS.

GRADENIGO, of Padua (*Internat. Congress of Otology*, Brussels, Sept. 10–14, 1888), states that the auricle of man, and of superior mammals, is the result of the reunion, more or less complete, between two systems very different respecting their embryology and morphology. The first, formed by the *colliculi bronchiales externi* of Moldenhauer, are devoted to the formation of the external auditory canal, and form by the union of their parts the *angular fossa* of His, the future concha.

The second system, which constitutes the pavilion proper, is composed of two elevations, to which the author gives the name of *hyoidal helix*, and the *mandibular helix*, the former being much more developed than the second. From the hyoidal helix the antihelix and the antitragus are formed, while the tragus is formed from the mandibular helix. The lobule appears very late in the human embryo by the production of a prolongation of the hyoidal helix.—*Annales des Maladies de l'Oreille*, etc., October, 1888.

POLYOTIA.

HARTMAN, of Berlin (*Internat. Congress of Otology*, Brussels, September 10–14, 1888), described at the Congress two cases of polyotia, and showed the photograph of a child who had, in front of the right auricle, a small mass resembling atrophied auricles. In this young patient there were other anomalies of development, as very marked asymmetry of the right side of the face, caused by atrophy of the superior and inferior maxillæ, and a congenital fistula near the nose. These anomalies may be attended by normal hearing.

A CASE OF CARCINOMA OF THE EAR, HAVING ITS ORIGIN PROBABLY IN THE TYMPANUM OR MASTOID ANTRUM.

DR. GORHAM BACON and DR. A. T. MUZZY, of New York, have reported an account of a case with the above-named features (*Archives of Otology*, vol. xvii., 1888).

The patient, a woman, fifty-six years old, stated that she had first noticed deafness in her right ear a year previous to consulting Dr. Muzzy. About six months later she observed a slight watery discharge coming from the ear, which had continued, and finally a swelling was observed in front of the ear; the pain, which had been occasional, now became constant, and facial paralysis supervened, and brought the patient to seek aid one year from the initial deafness, as stated above.

Examination revealed induration and swelling of the walls of the auditory canal, but no view of the membrana tympani. Passing a probe inward caused no pain, but considerable hemorrhage from the meatus. Three months later, in November 1887, she could hear loud voices in the affected ear (the right), and the tuning-fork, vibrating on the vertex, was heard best in the diseased ear. The tissues over the mastoid were indurated, and firm pressure over the mastoid apex caused deep-seated pain.

A Wilde's incision over the mastoid revealed denuded bone, and an irregular opening about one-fourth of an inch in diameter leading to the mastoid cells. There were found no sequestra of bone nor any pus.

Six weeks later, in December, it was decided to open the mastoid cavity. An incision was made half an inch behind the pinna, extending from the "upper border of the pinna to the lower extremity of the lobule." The tissues divided were as dense as cartilage. "The mastoid was found extensively diseased, containing loose sequestra of bone and soft tissue." These sequestra and the spongy tissue were removed, and the cavity scraped with a sharp spoon. A portion of the dense tissue from over the mastoid proved to be cancerous, and of "the fibrous or scirrhous variety."

The note made five days later stated that "the induration about the ear has increased, until at present it extends upward two inches, and forward toward the orbit two and a half inches; also behind the auricle two inches, and downward, just below the angle of the jaw, where there is some enlargement of the glands." Note of February 22d, two months later, shows that the patient remained in bed constantly after the operation, with great pain in the upper temporal region and vertex. "The pinna became greatly swollen and of a black color." A large swelling appeared below the ear, on the neck. Dysphagia, hemiplegia of right side, affected speech, and delirium supervened. Yet the patient lived until March 24th, a month longer, having suffered greatly from nausea and vomiting.

ON THE ACTION OF PHENIC GLYCERINE IN HYPERÆMIA OF THE TYMPANIC CAVITY.

MORPURGO, of Trieste (*International Congress of Otology*, Brussels, Sept. 10–14, 1888), recalled a communication on this subject made by B. Hewson, at the Basle Congress, on the action of phenic glycerine in hyperæmia of the tympanum. Morpurgo stated that for fifteen months he had employed this drug with marked success. In nearly all cases complaining of pain, and presenting signs of hyperæmia of the middle ear, the instillation, every two hours, of a ten per cent. solution of phenic acid (carbolic acid) in glycerine, rapidly arrested the pain, and prevented suppuration and perforation of the membrana. Ménière and Delstanche also praised the action of this solution, even recommending, in some cases, the use of equal parts of phenic acid and glycerine.—*Annales des Maladies de l'Oreille*, etc., October, 1888.

PATHOLOGY OF THE MIDDLE EAR.

POLITZER, of Vienna (*Internat. Congress of Otology*, Brussels, Sept. 10–14, 1888), read a paper upon this subject. It was accompanied by a number of plates, diagrams, microscopic sections, and anatomical specimens, illustrative of alterations of the oval window and the round window. Attention was drawn to the different axes necessary in making the sections for the microscope. In chronic catarrh, there occurs at first, on the oval window only, a hyperæmia, with some secretion. Later, the stapes ceases to vibrate, and finally adhesions form between the stapes and the niche of the oval window. Ankylosis of the stapes may also occur by the formation of thick and dense bands of fibrous tissue, or by true osseous tissue. In suppurative affections, the head of the stapes may be destroyed.

Politzer, furthermore, drew attention to the fact that in the newborn there are found in this region papillæ similar to those described by Gerlach as occurring on the inner surface of the membrana tympani. There may also be found in this region some fatty tissue. The author closed his paper by insisting upon the importance of pathological studies upon the region of the middle ear, as they alone can supply the basis of a rational and profitable therapeusis.—*Annales des Maladies de l'Oreille*, October, 1888.

WHAT CAN THE HUMAN EAR HEAR WITHOUT THE STAPES?

DR. E. BERTHOLD, of Königsberg, Prussia (*Archives of Otology*, vol. xvii., Sept. 1888), gives an account of a woman, thirty-eight years old, who had been the subject of otorrhœa for years, and in whom he found a stapes detached from the oval window, and its base turned toward, and adherent to the imperforate membrana tympani. At first, ossification and adhesion of the membrana tympani were diagnosticated. Then it was determined to cut through the synechiæ between the promontory and the membrana. While performing this operation the operator hit upon what he considered a piece of loose bone; upon hooking this out, it proved to be the entire stapes.

The hearing of the operated ear seemed unchanged, in the physician's opinion, but the patient said she heard better. She could still hear loud words at a short distance. So long as the patient remained quiet, she did not complain of dizziness; on standing up, however, the right leg (the side of the affected ear) doubled up under her, as has been observed in doves with unilateral injury to the semicircular canals. The vertiginous symptoms became worse even when lying in bed that night. In twenty-four hours later, the vertigo was much less, and the patient walked a long distance to consult her physician.

Dr. Berthold found that temporarily the hearing improved by fitting a piece of vitelline membrane from an egg over the perforation.

The case is noteworthy in many respects: first, in the occurrence of such a peculiar lesion to the stapes, the other ossicles remaining in sitû. Second, it is surprising that so much violent vertigo existed the first twenty-four hours, though very little, if any, labyrinth-fluid escaped. Third, the acuteness of hearing is worthy of note, as the general opinion has always been that complete deafness followed the loss of the stapes; but in this case, without a stapes, and with a co-existing perforation of the drum-membrane, loud speech was heard near the ear, and upon mechanical closure of the perforation with an artificial membrane, whispers could be heard fifteen feet.

The improvement in hearing in this case may have been due to vibrations communicated from the reinstated membrana tympani to the annulus tympanicus, and thence to the ossiculæ and the labyrinth, as suggested by Berthold in referring to some experiments of Johannes Müller upon vibrations of a membrane over a ring.

DISEASES OF THE EAR IN TYPHOID FEVER.

BÖKE, of Pesth (*Internat. Congress of Otology*, Brussels, September 10-14, 1888), states that there occur epidemics of typhoid fever, in which affections of the ear amount to four or five per cent. Sometimes the ear is affected only through the nervous system, but this is transient. In other instances there occur veritable congestions of the middle ear, ending in suppuration. The treatment is the same as for any other form of otitis media.

DEAFNESS OF OLD AGE.

SAPOLINI, of Milan (*Internat. Congress of Otology*, Brussels, Sept. 10-14, 1888), describes a method of his, which he states he has successfully employed in sixty-two cases of deafness of old age. It consists in mopping the membrana tympani with a weak oleaginous solution of phosphorus. He claims that this treatment diminishes the opacity of the membrane, increases the circulation, and improves the hearing.

OPERATIVE TREATMENT OF ABSCESS OF THE BRAIN, CONSECUTIVE TO SUPPURATIVE OTITIS.

MR. THOMAS BARR, of Glasgow (*Internat. Congress of Otology*, Brussels, September 10–14, 1888), read a paper on the above-named subject. He has had seven cases operated on by Macewen, with five cures. In one case, the child having died later of peritonitis, it was shown at the post-mortem examination that the pus cavity in the brain had healed. Mr. Barr said that heretofore these cases had been considered beyond the aid of surgical treatment, and he dwelt on the fact that the diagnosis is still difficult between abscess of the brain and phlebitis of the sinuses, and also the precise localization of the abscess is difficult. Stewart, in the discussion, said that the diagnosis could be made by the motor symptoms, but Politzer maintained that these symptoms are rare, while those of pain are predominant.—*Annales des Maladies de l'Oreille*, Oct. 1888.

DISEASES OF THE LARYNX AND CONTIGUOUS STRUCTURES.

UNDER THE CHARGE OF

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PERITONSILLITIS FROM INTRANASAL AND INTRAMAXILLARY DISEASE.

ZIEM reports (*Monats. f. Ohr., etc.*, No. 9, 1888) two cases of peritonsillitis apparently originating in purulent intranasal disease, one of which was associated with similar disease of the antrum. Ziem refers to a number of articles published by him which show that an abscess of the antrum may break through its median, its outer, or its upper wall; that it may, through the medium of the vessels in the facial surface of the body of the bone, give rise to infiltration of the cheek, to facial erysipelas, to abscess of the lower eyelid, and to eczema and acne of the face; that extending along the roof of the cavity it may occasion infraorbital neuritis, iritis, panophthalmitis, and phlegmon of the orbital connective tissue. In like manner it may, by way of its posterior wall along the maxillary tuberosity, involve the retromaxillary soft tissues. When, he continues, it is remembered that the cephalopharyngeus muscle, external to the tonsil, springs with several fasciculi from the maxillary tuberosity and from the pterygomaxillary ligament, it can be comprehended how under certain conditions a suppuration in the antrum may lead to a peritonsillitis as in the instance detailed. He believes that this exposition is not without